

In the Claims:

Please replace claims 1 and 24 with the following amended claims. Please enter new claims 32-35 as below. The amended claims are shown in the attached Appendix with additions underline and deletions bracketed.

1. (Once Amended) A method for beneficiation of a mineral sulfide-containing material by air-injection froth flotation in the presence of a collector, the method comprising the steps of:
- a) providing an aqueous slurry of the mineral sulfide-containing material,
 - b) adding a selective collector to the slurry in an amount less than about 100g/ton of the mineral sulfide-containing material, the collector comprising at least one oil selected from the group consisting of:
 - 1) a natural oil or synthesized oil comprising:
 - A) triglycerides containing fatty acids of only 20 carbons or less, or
 - B) an ester made from a fatty acid and an alcohol; and
 - 2) an essential oil;
 - c) selectively floating the mineral sulfide by injecting air and selectively allowing the mineral sulfides to adhere to the air bubbles; and
 - d) recovering the mineral.
-

24. (Once Amended) A method for beneficiation of a metallic species of gold, silver, copper, palladium, platinum, iridium, osmium, rhodium, and ruthenium by air-injection froth flotation in the presence of a collector, the method comprising the steps of:

- a) providing an aqueous slurry of a material containing the metallic species, the material being derived from any ore, concentrate, residue, slag, or waste,
- b) adding a selective collector to the slurry in an amount less than about 100 g per ton of material containing metallic species, the collector comprising at least one oil selected from the group consisting of:

- 92
- 1) a natural oil or synthesized oil comprising:
 - A) triglycerides containing fatty acids of only 20 carbons or less, or
 - B) an ester made from a fatty acid and an alcohol; and
 - 2) an essential oil;

c) selectively floating the metallic species by injecting air and selectively allowing the mineral sulfides to adhere to the air bubbles; and

- d) recovering the metallic species.

32. (New) The method of claim 1 wherein the collector is added in an amount less than about 50 g/ton of material.

33. (New) The method of claim 1 wherein the collector is added in an amount less than about 30 g/ton of material.

93

34. (New) The method of claim 1 wherein the collector is added in an amount less than about 10 g/ton of material.

35. (New) The method of claim 1, further comprising separating the floated mineral sulfide and subjecting the mineral sulfide to a second floatation by repeating steps (b) and (c).